

## **AMENDMENTS TO THE CLAIMS**

This listing of claims replaces all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

Claim 1-4. (Cancelled).

Claim 5. (Currently Amended) A communication system comprising the [[a]] transmission apparatus as claimed in Claim 7 for ~~transmitting a signal at plural types of transmission rates,~~ and a reception apparatus for receiving the transmitted signal, wherein:

~~the transmission apparatus comprises:~~

~~signal generation means for generating a signal to be transmitted into which pilot symbols which are predetermined patterns have been inserted, such that a ratio of a number of the pilot symbols to a total number of symbols in a single slot of the signal becomes a value responsive to a transmission rate of the signal; and~~

~~transmission means for transmitting the generated signal, and~~

~~the reception apparatus comprises:~~

~~reception means for receiving the transmitted signal; and~~

~~coherent detection means for carrying out coherent detection by using the pilot symbols included in the received signal.~~

Claim 6. (Currently Amended) The communication system as claimed in claim 5, wherein the signal generation means generates the signal to be transmitted into which the pilot symbols have been inserted, such that ~~the ratio of the number of the pilot symbols to the total number of symbols in the single slot of the signal becomes a substantially optimum value in~~

~~consideration of both~~ accuracy of coherent detection is maintained ~~by using the pilot symbols~~  
~~and transmission efficiency of the signal.~~

Claim 7. (Currently Amended) A transmission apparatus for transmitting a signal at plural types of transmission rates, comprising:

signal generation means for generating a signal to be transmitted into which pilot symbols which are predetermined patterns have been inserted, such that a ratio of the ~~[[a]]~~ number of the pilot symbols to the ~~[[a]]~~ total number of symbols in a single slot of the signal becomes smaller in a case where value responsive to a transmission rate of the signal is high, than that in a case where the transmission rate is low; and

transmission means for transmitting the generated signal.

Claim 8. (Currently Amended) The transmission apparatus as claimed in claim 7, wherein the signal generation means generates the signal to be transmitted into which the pilot symbols have been inserted, such that ~~the ratio of the number of the pilot symbols to the total number of symbols in the single slot of the signal becomes a substantially optimum value in~~ consideration of both accuracy of coherent detection is maintained ~~by using the pilot symbols~~ ~~and transmission efficiency of the signal.~~

Claim 9. (Currently Amended) A transmission method for transmitting a signal at plural types of transmission rates, comprising:

a signal generation step of generating a signal to be transmitted into which pilot symbols which are predetermined patterns have been inserted, such that a ratio of a number of the pilot

symbols to the ~~[[a]]~~ total number of symbols in a single slot of the signal becomes smaller in a case where value responsive to a transmission rate of the signal is high, than that in a case where the transmission rate is low; and

a transmission step of transmitting the generated signal.

Claim 10. (Currently Amended) The transmission method as claimed in claim 9, wherein the signal generation step generates the signal to be transmitted into which the pilot symbols have been inserted, such that ~~the ratio of the number of the pilot symbols to the total number of symbols in the single slot of the signal becomes a substantially optimum value in consideration of both accuracy of coherent detection~~ is maintained by using the pilot symbols and ~~transmission efficiency of the signal~~.

### REMARKS

These remarks and the accompanying amendments are responsive to the Office Action dated October 26, 2007 (hereinafter referred to as the "Office Action"). At the time of the last examination, Claim(s) 5-10 were pending, of which Claim(s) 5, 7 and 9 are independent. The Office Action rejected Claim(s) 5-10. By this response, all of the claims 5-10 are amended, with only Claims 7 and 9 being independent.

There is but one remaining rejection standing in the present patent application. Specifically, Section 4 of the Office Action rejects all of the Claims 5-10 under 35 U.S.C. 103(a) as being unpatentable over United States patent number 5,914,959 issued to Marchetto et al. (the patent hereinafter referred to as "Marchetto") in view of United States patent number 5,963,592 issued to Kim (the patent hereinafter referred to as "Kim").

The sole remaining independent Claims 7 and 9 each recite "such that a ratio of the number of the pilot symbols to the total number of symbols in a single slot of the signal becomes smaller in a case where a transmission rate of the signal is high, than that in a case where the transmission rate is low". This recital is not disclosed, taught or otherwise suggested in any of the cited art. Accordingly, the 35 U.S.C. 103(a) rejection should be withdrawn.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 25<sup>th</sup> day of January, 2008.

Respectfully submitted,

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